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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,769	03/30/2001	Stanislaw Wladyslaw Janisiewicz	00702.00017	3619

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EXAMINER

LE, DANG D

ART UNIT PAPER NUMBER

2834

DATE MAILED: 08/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/820,769

Applicant(s)

JANISIEWICZ ET AL.

Examiner

Dang D Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 19-23 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 7/10/02 have been fully considered but they are not persuasive. The applicant's argument is on the ground that Cho does not disclose "the positioning system integrally formed with at least one of the phase modules", "a flexible shaft" and "the rolling wheels that contact the stator . . . not secured to a shaft that is integral with one of the phase modules."

In fact, the positioning system (60) and the shaft (64) of Cho is integral with the phase modules (poles on rotor 62) because they are connected together by pins (65). It is noted that a book can be said to be integral with the floor although it is placed on a desk. Moreover, the shaft (64) can be said flexible because of spring (72).

As a result, the rejection is still deemed proper and repeated herein.

Claim Objections

2. Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 12 is dependent on claim 11, which was canceled. Accordingly, the claim has not been further treated on the merits.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4-9 and 19-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Cho.

Regarding claim 1, Cho shows a variable reluctance motor (Figures 5-8) comprising:

- At least one first phase module (poles on rotor 62) and at least one corresponding second phase module (poles on opposite side of rotor 62) of said first phase module positioned opposite and spaced from said corresponding second phase module;
- A stator (68) extending between said first and second phase modules and (see Figure 1, 38)
- At least one stator positioning system (60, Figure 5) integral with one of said phase modules and configured to adjust the position of said one of said phase modules relative to said stator such that the level of noise (less vibration, less noise) produced by said motor is adjusted when said one of said phase modules is moved relative to said stator.

Regarding claim 4, it is noted that Cho also shows said positioning system (60) comprising at least one shaft (64) that extend from the at least one first phase

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module, and a second shaft extending from the at least one second phase module, each said shaft carrying at least one positioning member (66 and 74) configured to contact said stator such that the position of said at least one first phase module and said at least one second phase module is adjusted relative to said stator.

Regarding claim 5, it is noted that Cho also shows said positioning members comprising stator guide bearings (66), said stator guide bearings being rotatable relative to said stator.

Regarding claim 6, it is noted that Cho also shows at least one shaft being flexible (due to adjusting screw 74), and wherein said positioning system includes at least one shaft flexing member (74) contacting said at least one shaft such that a flexing force is exerted on said at least one shaft.

Regarding claim 7, it is noted that Cho also shows said at least one shaft (64) comprising a central portion (for pivot 65) and a plurality of end portions (for pivot 75) extending from said central portion, said end portions having diameters less than that of said central portion (Figure 6).

Regarding claim 8, it is noted that Cho also shows a variable reluctance motor comprising:

- At least one phase unit comprising first and second phase modules (poles and opposite poles of rotor 62), said first and second phase modules positioned opposite and spaced apart from each other;

- A stator (68) extending between said first and second phase modules such that a gap is formed between said stator and each opposing phase modules; and
- At least one positioning system (60) configured to contact and move at least one of the phase modules relative to the stator to adjust the size of said gaps thereby adjusting the level of noise produced by the motor, said at least one positioning system comprising flexible bearing shafts (64) each supporting at least one stator engaging member (66).

Regarding claim 9, it is noted that Cho also shows said first and second opposing phase modules being positioned on opposite sides of said stator (poles and opposite poles of rotor 62).

Regarding claim 19, Cho shows a variable reluctance motor (Figures 5-8) comprising:

- A phase assembly comprising first and second terminal end surfaces (of poles on rotor 62 and wheels 66), at least one first phase module (poles on rotor 62), at least one second phase module (poles on opposite side of rotor 62), said at least one first phase module facing said at least one second phase module, and at least one stator positioning system (60); and
- A stator (68) extending between said first and second phase modules and (see Figure 1, 38), wherein said at least one stator positioning system (60, Figure 5) comprises at least one shaft (64) integrally connected with one of said phase modules and at least one stator positioning member for contacting

said stator and adjusting the position of said one of said phase modules relative to said stator such that the level of noise (less vibration, less noise) produced by said motor is altered.

Regarding claim 20, it is noted that Cho also shows the phase modules and the at least one stator positioning system located between the first and second terminal end surfaces.

Regarding claim 21, it is noted that Cho also shows said at least one positioning systems including a pluralities of shaft (64) each carrying two stator position members (66, 63).

Regarding claim 22, it is noted that Cho also shows said shaft being flexible (due to springs 72).

Regarding claim 23, it is noted that Cho also shows said shaft being flexible in a direction that extends perpendicular to a length of the stator (from center of pins 75).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 2, 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho in view of Madsen.

Regarding claims 2 and 10, Cho shows all of the limitations of the claimed invention except for said first and second phase modules each comprising a generally C shaped core, each said core including a wire positioned about said core such that magnetic flux is propagated through said core when current flows through said wire. (Cho does not clearly show the type of rotor/armature used)

Madsen shows said first and second phase modules (101, 102) each comprising a generally C shaped core, each said core including a wire (117, 117a, 118, 118a) positioned about said core such that magnetic flux is propagated through said core when current flows through said wire for the purpose of making a linear motor.

Since Cho and Madsen are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use first and second phase modules each comprising a generally C shaped core, each said core including a wire positioned about said core such that magnetic flux is propagated through said core when current flows through said wire as taught by Madsen for the purpose discussed above.

Regarding claim 3, it is noted that if the motor of Cho modified by Madsen, the motor would also shows said stator spaced from said first and second phase modules by corresponding air gaps said air gaps changing size as the position of the first and second phase modules is adjusted relative to said stator, thereby adjusting the level of noise produced by said motor.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Information on How to Contact USPTO

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (703) 305-0156. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone

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numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

DDL
August 23, 2002

DC

Gary X6